

BUCKLING OF N-SIDED POLYGONS*

The radial (or horizontal) geometrical buckling of regular polygons, where R is the radius of the inscribed circular cylinder of height H within the polygon and (π^2/H^2) is the axial (or vertical) geometrical buckling, is as follows (all dimensions are extrapolated dimensions):

<u>No. Sides</u>	<u>$B_g^2 - \pi^2/H^2$</u>
3	$4.3865/R^2$
4	$4.9348/R^2$ ($=2\pi^2/D^2$ or square, see p. II.B.2-1)
5	$5.2080/R^2$
6	$5.3665/R^2$
7	$5.4672/R^2$
8	$5.5352/R^2$
9	$5.5834/R^2$
10	$5.6188/R^2$
11	$5.6456/R^2$
12	$5.6831/R^2$
13	$5.6826/R^2$
14	$5.6958/R^2$
15	$5.7056/R^2$

* Raymond L. Murray, et al, Nuclear Science and Engineering, October, 1968.

BUCKLING OF N-SIDED POLYGONS (CONTINUED)

<u>No. Sides</u>	<u>$B_g^2 - \pi^2 / H^2$</u>
16	$5.7154/R^2$
17	$5.7228/R^2$
18	$5.7291/R^2$
19	$5.7344/R^2$
20	$5.7390/R^2$
∞	$5.7831/R^2$ ($= J_0^2 / R^2$ or cylinder, see p. II.B.2-1)